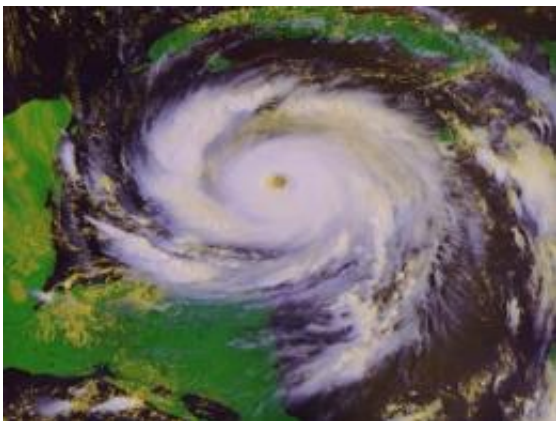


# Researchers predict below-average 2014 Atlantic hurricane season

August 1 2014

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(Phys.org) —Colorado State University researchers continue to predict a below-average hurricane season for the Atlantic basin in 2014, citing exceptionally unfavorable hurricane formation conditions in the tropical Atlantic combined with the likely development of a weak to moderate El Niño event. The below-average prediction is largely due to strong vertical wind shear, dry mid-level air and cool sea surface temperature anomalies in the tropical Atlantic and Caribbean.

The CSU Tropical Meteorology Project team is calling for a total of 10 named storms during the Atlantic [hurricane season](#), June 1 to Nov. 30. Of those, researchers expect four to become hurricanes and one to reach major [hurricane](#) strength (Saffir/Simpson category 3-4-5) with sustained

winds of 111 miles per hour or greater.

Hurricane Arthur formed in early July, so an additional nine named storms and three hurricanes are predicted for the remainder of the hurricane season.

The team bases its forecasts on over 60 years of historical data that include Atlantic sea surface temperatures, sea level pressures, [vertical wind shear](#) levels (the change in wind direction and speed with height in the atmosphere), El Niño (warming of waters in the central and eastern tropical Pacific), and other factors.

"So far, the 2014 season is exhibiting characteristics similar to the 1957, 1986, 1993, 2002, and 2009 hurricane seasons, all of which had below-normal hurricane activity," said Phil Klotzbach, lead author of the report.

"The tropical Atlantic remains anomalously cool, and vertical shear throughout the basin remains at above-average levels. In addition, the chances of a weak to moderate El Niño event during the peak of the hurricane season remain elevated," Klotzbach added. "Historical data indicate fewer storms form in these conditions."

The team predicts that 2014 [tropical cyclone activity](#) will be about 70 percent of the average season. By comparison, 2013's tropical cyclone activity was about 45 percent of the average season.

## Three decades of forecasts

This is the 31st year CSU researchers have issued the Atlantic basin season hurricane forecast since William Gray launched the report in 1984.

The CSU forecast is intended to provide a best estimate of activity to be experienced during the upcoming season, not an exact measure.

Gray cautioned coastal residents to take the proper hurricane precautionary measures each year, regardless of the amount of activity being forecast.

"It takes only one landfall event near you to make this an active season," he said.

The report also includes the probability of major hurricanes making U.S. landfall during the remainder of the hurricane season:

- 38 percent for the entire U.S. coastline (average for the last century is 52 percent)
- 21 percent for the U.S. East Coast including the Florida peninsula (average for the last century is 31 percent)
- 21 percent for the Gulf Coast from the Florida panhandle westward to Brownsville (average for the last century is 30 percent)
- 30 percent for the Caribbean (average for the last century is 42 percent).

The forecast team also tracks the likelihood of tropical storm-force, hurricane-force and major hurricane-force winds occurring at specific locations along the coastal United States, the Caribbean and Central America through its Landfall Probability website, [www.e-transit.org/hurricane](http://www.e-transit.org/hurricane).

The site provides information for all coastal states as well as 11 regions and 205 individual counties along the U.S. coastline from Brownsville, Texas, to Eastport, Maine.

Landfall probabilities for regions and counties are adjusted based on the current climate and its projected effects on the upcoming hurricane season.

Klotzbach and Gray update the site regularly with assistance from the GeoGraphics Laboratory at Bridgewater State University in Massachusetts.

Funding for this year's report has been provided by Interstate Restoration, Ironshore Insurance, and personal resources.

## **Atlantic Basin Hurricane Forecast for 2014**

-Released July 31, 2014-

### **Tropical Cyclone Parameters Extended Range**

- Named Storms (12) 10
- Named Storm Days (60.1) 40
- Hurricanes (6.5) 4
- Hurricane Days (21.3) 15
- Major Hurricanes (2.0) 1
- Major Hurricane Days (3.9) 3
- Accumulated Cyclone Energy (92) 65
- Net Tropical Cyclone Activity (103%) 70

\*Numbers in ( ) represent medians based on 1981-2010 data.

**More information:** The complete 2014 forecast is available online:  
[www.news.colostate.edu/content...ocuments/aug2014.pdf](http://www.news.colostate.edu/content...ocuments/aug2014.pdf)

Provided by Colorado State University

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